

REMARKS

Claim Status

Claims 1-17 were pending in the case at the time of the current Office Action. Claims 1, 3, 6, and 15-17 are currently amended in the application. Claims 2, and 4-5 are cancelled herein. Claims 1, 3, and 6-17 are currently pending in the application.

Section 102 rejections

In the current Office action, claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by O'Neill et al. (US 6,219,653).

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

Claim 1 recites a computerized method for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said method comprising the steps of:

- gathering physical property data about a carrier unit using a processing system, said physical property data about said carrier unit comprising carrier unit dimensions and weight limit of said carrier unit;

- calculating a total available capacity in said carrier unit using said processing system, wherein said total available capacity comprises a weight limit for said carrier unit and a volume of said carrier unit;

- storing said total available capacity in said carrier unit in a memory of said processing system;

- gathering a distance a first shipment is to be transported using said processing system;

- gathering physical property data about said first shipment using said processing system, wherein said physical property data about said first shipment is selected from the group consisting of dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment,

dimensions of said shipment, weight of said shipment, volume of said shipment, mass of said shipment, number of packages in said shipment, density of said shipment, class of said shipment;

calculating an amount of said total available capacity to be occupied by said first shipment in said carrier unit using said processing system, wherein said amount of total available capacity to be occupied by said first shipment comprises a total weight of said first shipment and a total volume to be occupied by said first shipment;

storing said amount of said total available capacity occupied by said first shipment in said carrier unit in said memory of said processing system;

automatically determining an optimal spatial orientation of one or more packages of said first shipment relative to each other and to said carrier unit available capacity using said processing system;

storing said optimal spatial orientation of said one or more packages of said first shipment in said memory of said processing system;

calculating a remaining available capacity in said carrier unit, using said processing system, after said first shipment is optimally oriented in said carrier unit;

storing said remaining available capacity in said carrier unit in said memory of said processing system;

determining a rate to be charged for said first shipment, using said processing system, based upon said amount of said total available capacity occupied by said first shipment in said carrier unit and said distance said first shipment is to be transported;

storing said rate in said memory of said processing system;

calculating a total charge for transporting said first shipment using said processing system; and

displaying said total charge on a display of said processing system.

It is respectfully submitted that O'Neill et al. (U.S. 6,219,653), hereinafter O'Neill, does not teach or suggest the invention of independent claim 1. For example, O'Neill at least does not teach or suggest automatically determining an optimal orientation of one or more packages of a first shipment relative to each other and to a carrier unit available capacity using a processing system, and calculating a remaining available capacity in the carrier unit, using the processing

system, after the first shipment is optimally oriented in the carrier unit. Instead, O'Neill seems to be geared toward the loading and shipping of forest products such as logs and lumber for the logging industry, mill sites, and lumber warehouses, where there are logs and boards of certain lengths which may all go into a container in a same length-wise direction and are just stacked up as opposed to employing any kind of sophisticated, automatic optimal orientation of individual pieces as in the claimed invention.

The claimed invention is geared toward using various methods to calculate the cost or charge for a shipment or shipments. The claimed invention focuses on arranging the shipment in a shipment container in an optimal way with respect to the container and, for example, other shipments that may also be going into the same container, in order to reduce cost for the overall shipment. The resultant cost for a given shipment can be affected by other shipments that are going into the same container to be shipped at the same time. Therefore, the cost of an individual shipment can be a function of other shipments and how the individual packages of those shipments are oriented within the shipping container (see the example of Fig. 1 as described in paragraphs [0036] to [0039] of the present application).

The Applicant does not see anything in O'Neill that refers to optimizing a spatial orientation of a shipment as per the claimed invention. In the claimed invention, "determining an optimal spatial orientation" refers to figuring out how individual packages within the first shipment may be spatially oriented with respect to each other (e.g., how they are stacked or positioned) within the carrier unit to optimize the use of the available volume as described in the specification. O'Neill does not describe, in any way, such a manipulation of the orientation of a shipment in order to optimize the use of the available volume or space. Instead, O'Neill simply describes determining load parameters of a shipment such as weight, volume, and quantity of units of a load or shipment in relation to a capacity of a selected delivery container (see column 25, lines 30-67 and column 26, lines 1-2). O'Neill is silent with respect to any discussion of optimizing an orientation of a shipment and/or units of the shipment. In fact, O'Neill is silent with respect to any discussion of shipment orientation at all, except that it is inherent that a shipment will have some resultant spatial orientation when loaded, which may be displayed to the user of the O'Neill system. But O'Neill seems to be focused merely on overall gross

parameters of a shipment such as total volume, total weight, and number of units in the shipment in relation to the capacity of the selected delivery container.

O'Neil describes graphically representing a load in comparison to a maximum load parameter of the delivery container (see column 12, lines 25-27). O'Neill also describes graphically displaying a representation of the load in a hull (see column 12, lines 37-44). However, O'Neill does not specifically teach or suggest optimally orienting the individual packages or pieces of a shipment in a container with respect to each other at all, and O'Neill certainly does not teach or suggest the idea of optimizing one shipment with respect to another shipment as in, for example, claim 3 of the present application.

The Examiner seems to think that optimization is inherently obvious because O'Neill displays a graphical representation of the load in the hull. However, just because the graphical representation is displayed does not mean that the load has been optimized within the hull. It just shows how the load has been loaded up in the delivery container, and what the load parameter is compared to the maximum load parameter of the delivery container (i.e., O'Neill gives visual feedback regarding the load parameters). Column 3 lines 17-19 state, "The user may increase or decrease the number of units in the load to optimize the load capacity of the selected delivery container." There is no suggestion or teaching by O'Neill that anything has been optimized with respect to spatial orientation. The shipment could have been "stupidly" oriented in the container, taking up more volume than it needs to, and may be totally un-optimized. On the other extreme, there may be only one way to place the shipment in the container and, therefore, no optimization is needed (e.g., stacking lengths of lumber all the same way in a container).

The system of O'Neill will display certain indicators to a user but will not give the user any other indication of whether or not the shipment is optimized with respect to orientation, and won't give the user any suggestion of how to better optimize the load for orientation. The only thing O'Neill can do is allow the user to view how the shipment is loaded and, maybe, it will be obvious to the user if things are not loaded in an optimum way, and the user can go back and try to manually adjust things as to how they should be re-oriented. But such is not doing any kind of automatic optimization as in the claimed invention.

The claimed invention is much more sophisticated than O'Neill by using more details and determinants to realize a final "price" to ship a shipment. The loading space criteria is important

for both the shipper and the carrier to maximize and optimize their relationships, costs, and pricing. Both current and historical data affect both relationships as well as opportunities for a shipper to affect the qualities admired by a carrier and the carrier to have full knowledge of product environments to enable other shipments to be co-loaded within the same container.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 1 is not anticipated by O'Neill, and it is respectfully submitted that independent claim 1 defines allowable subject matter. Also, since claims 3 and 6-10 depend either directly or indirectly from claim 1, it is respectfully submitted that claims 3 and 6-10 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 1-10 under 35 U.S.C. 102(e) be removed.

Independent claim 11 recites a data processing system for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said system comprising:

- a computing device and a display;

- means for entering information about a carrier unit, said information about said carrier unit comprising one or more members of the group consisting of dimensions of said carrier unit, weight capacity of said carrier unit, density capacity of said carrier unit; and length of said carrier unit;

- means for calculating a total volume and a weight capacity of said carrier unit based on said entered information about said carrier unit;

- means for storing said total volume and said weight capacity of said carrier unit;
- means for displaying said total volume and said weight capacity of said carrier unit;

- means for entering a distance a first shipment is to be transported;

- means for entering information about said first shipment, said information about said first shipment comprising one or more members of the following: dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment; volume of said shipment, weight of said shipment, mass of said shipment, density of said shipment, number of packages in said shipment; and class of said shipment;

means for determining a value for said first shipment of a volume of said first shipment, a density of said first shipment, a total weight of said first shipment, and a total length of said first shipment based on said information entered about said first shipment;

means for storing said values of said volume of said first shipment, said density of said first shipment, said total weight of said first shipment, and said total length of said first shipment based on said information entered about said first shipment;

means for displaying said calculated values for said first shipment;

means for determining the optimal orientation of one or more packages in said first shipment relative to said carrier unit;

means for storing said optimal orientation of said one or more packages in said first shipment;

means for displaying said optimal orientation of said one or more packages in said first shipment;

means for determining an amount of carrier unit total area occupied by said first shipment and a portion of weight capacity occupied by said first shipment;

means for storing said amount of carrier unit area occupied by said first shipment and said portion of weight capacity occupied by said first shipment; and

means for displaying said amount of carrier unit area and said portion of weight capacity occupied by said first shipment.

It is respectfully submitted that O'Neill does not teach or suggest the invention of independent claim 11. For example, O'Neill does not teach or suggest a means for determining the optimal orientation of one or more packages in a first shipment relative to a carrier unit. The arguments above for Claim 1 apply.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 11 is not anticipated by O'Neill, and it is respectfully submitted that independent claim 11 defines allowable subject matter. Also, since claims 12-14 depend either directly or indirectly from claim 11, it is respectfully submitted that claims 12-14 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 11-14 under 35 U.S.C. 102(e) be removed.

Claim 15 recites a computer program product for use with a data processing system for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said product comprising:

a computer usable medium having computer readable program code means embodied in said medium for determining available capacity in a carrier unit when said code means for determining said available capacity in said carrier unit is executed on a data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining an amount of space to be occupied by a first shipment in said carrier unit when said code means for determining an amount of space to be occupied by said first shipment in said carrier unit is executed on said data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining an optimal orientation for said first shipment in said carrier unit when said code means for determining said optimal orientation of said first shipment in said carrier unit is executed on said data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said first shipment is loaded onto said carrier unit;

the computer usable medium having computer readable program code means embodied in said medium for storing said available capacity of said carrier unit, said amount of space to be occupied by said first shipment in said carrier unit, said remaining space in said carrier unit after said first shipment is loaded into said carrier unit, and said optimal orientation of said first shipment in said carrier unit when said code means for said storing is executed on said data processing system; and

the computer usable medium having computer readable program code means embodied in said medium for determining whether additional packages can be added to said carrier unit when said code means for determining whether said additional packages can be added to said carrier unit is executed on said data processing system.

It is respectfully submitted that O'Neill does not teach or suggest the invention of independent claim 15. For example, O'Neill does not teach or suggest a computer usable

medium having computer readable program code means embodied in the medium for determining an optimal orientation for the first shipment in the carrier unit when the code means for determining the optimal orientation of the first shipment in the carrier unit is executed on the data processing system. The arguments above for claim 1 apply.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 15 is not anticipated by O'Neill, and it is respectfully submitted that independent claim 15 defines allowable subject matter. Also, since claims 16-17 depend either directly or indirectly from claim 15, it is respectfully submitted that claims 16-17 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 15-17 under 35 U.S.C. 102(e) be removed.

Accordingly, the applicant respectfully requests reconsideration of the rejections based on at least the foregoing. After such reconsideration, it is urged that allowance of all pending claims will be in order.

Respectfully submitted,



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